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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/921,677 | 08/03/2001 | Lee P. Noehring | 211139.90107 | 8166 |

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| EXAMINER | |
|---|---|
| THAI, HANH B | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2161 | |

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/921,677 | NOEHRING ET AL. | |
| | Examiner | Art Unit | |
| | Hanh B. Thai | 2161 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on *communication filed May 10, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *19-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/4/02 & 1/9/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is in response to the communication filed May 10, 2005.

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 19-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions. Election was made without traverse in the reply filed on May 10, 2005.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8-14, 16-17 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryers et al. (US Pub. 2003/0126233 A1) in view of Thacker (US 5,193,197).

Regarding claims 1 and 35, Bryers discloses in a system and a computer-readable medium having multiple security channels, a method of modifying an entry in a security association database, the method associated with each channel comprising:

- retrieving the security association data structure from the predetermined address location ([0194]; [0195] and [0198], Bryers discloses the retrieving the security association information from the stage 380-1);
- modifying the retrieved security association data structure ([0194] and [0195], Bryers discloses that the retrieved security association will be updated would reads on "modifying the retrieved security association"); and

- writing the modified security association data structure to the predetermined address location in the security association database ([0195]; [0289]; [0291]; [0298]; [0322] and [0409], Bryers).

Bryers, however, does not discloses whether another of the multiple security channels has a higher priority to access a security association database structure located at a predetermined address location in the security association database. Thacker, on the other hand, discloses a distributed dynamic priority arbitration method for access to a shared resource including the comparation of whether the current level or another level has higher priority to access the shared resource (abstract; col.3, line 33 to col.4, line 44, Thacker). Therefore, it would have been obvious to one of ordinary skill in the art to apply the dynamic priority arbitration method of Thacker into the security access structure of Bryers in order to grant access to a higher priority channel.

Regarding claim 2, Bryers/Thacker combination discloses the method of claim 1, wherein the step of determining whether another of the multiple security channels has a higher priority to retrieve the security association data structure comprises: requesting access to the predetermined address location; assigning a weight value to the request based on a sequential order of the request relative to access requests made by other of the security channels; and granting the access request to the security channel with the highest assigned weight value ([0584]-[0588], Bryers).

Regarding claim 3, Bryers/Thacker combination discloses the method of claim 2, wherein the step of requesting access comprises setting a request bit in a control register ([0346] and [0544], Bryers).

Regarding claim 4, Bryers/Thacker combination discloses the method of claim 3, wherein the step of granting the access request comprises setting a grant bit in the control register ([0343] and [0346], Bryers).

Regarding claim 5, Bryers/Thacker combination discloses the method of claim 1, wherein the step of writing the modified security association data structure to the predetermined address location comprises: writing the modified security association data structure to a write buffer prior to writing it to the predetermined address location; and writing the modified security association data structure to the predetermined address location from the write the buffer ([0195]; [0289]; [0291]; [0298]; [0322] and [0409], Bryers).

Regarding claim 6, Bryers/Thacker combination discloses the method of claim 5, wherein the step of requesting access comprises setting a request bit in a control register, and wherein the method further comprises: resetting the request bit prior to writing the modified security association data structure to the predetermined address location from the write buffer ([0584]-[0591], Bryers).

Regarding claim 8, Bryers/Thacker combination discloses the method of claim 1, further comprising: storing the retrieved security association data structure in a local memory; and modifying the retrieved security association data structure in the local memory ([0194]; [0198]; [0201] and [0204], Bryers).

Regarding claim 9, Bryers/Thacker combination discloses the method of claim 1, further comprising: storing the predetermined address location of the retrieved security association data structure in a register ([0378] and [0380], Bryers).

Regarding claim 10, Bryers discloses in a system having multiple security channels, a method of modifying an entry in a security association database, the method associated with each channel comprising:

- requesting access to a predetermined address location in the security association database ([0286]-[0287], Bryers);
- assigning a weight value to the request based on a sequential order of the request relative to access requests to the predetermined address location made by other of the security channels ([0178]-[0183], Bryers);
- retrieving the security association data structure from the predetermined address location ([0194]; [0195] and [0198], Bryers discloses the retrieving the security association information from the stage 380-1);
- modifying the retrieved security association data structure ([0194] and [0195], Bryers discloses that the retrieved security association will be updated would reads on "modifying the retrieved security association"); and
- writing the modified security association data structure to the predetermined address location in the security association database ([0195]; [0289]; [0291]; [0298]; [0322] and [0409], Bryers).

Bryers, however, does not discloses whether another of the multiple security channels has a higher priority to access a security association database structure located at a predetermined address location in the security association database. Thacker, on the other hand, discloses a distributed dynamic priority arbitration method for access to a shared resource including the comparation of whether the current level or another level has higher priority to access the shared

resource (abstract; col.3, line 33 to col.4, line 44, Thacker). Therefore, it would have been obvious to one of ordinary skill in the art to apply the dynamic priority arbitration method of Thacker into the security access structure of Bryers in order to grant access to a higher priority channel.

Regarding claim 11, Bryers/Thacker combination discloses the method of claim 10, wherein the step of requesting access comprises setting a request bit in a control register ([0346] and [0544], Bryers).

Regarding claim 12, Bryers/Thacker combination discloses the method of claim 10, wherein the security association data structure is retrieved in response to setting a grant bit in the control register ([0346] and [0544], Bryers).

Regarding claim 13, Bryers/Thacker combination discloses the method of claim 10, wherein the step of writing the modified security association data structure to the predetermined address location comprises: writing the modified security association data structure of to a write buffer prior to writing it to the predetermined address location; and writing the modified security association data structure to the predetermined address from the write the buffer ([0195]; [0289]; [0291]; [0298]; [0322] and [0409], Bryers).

Regarding claim 14, Bryers/Thacker combination discloses the method of claim 13, wherein the step of requesting access comprises setting a request bit in a control register, and wherein the method further comprises: resetting the request bit prior to writing the modified security association data structure to the predetermined address location from the write buffer ([0584]-[0591], Bryers).

Regarding claim 16, Bryers/Thacker combination discloses the method of claim 10, further comprising: storing the retrieved security association data structure in a local memory; and modifying the retrieved security association data structure ([0194]; [0198]; [0201] and [0204], Bryers).

Regarding claim 17, Bryers/Thacker combination discloses the method of claim 10, further comprising: storing the predetermined address location of the retrieved security association data structure in a register ([0378] and [0380], Bryers).

3. Claims 7, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryers et al. (US Pub. 2003/0126233 A1) in view of Thacker (US 5,193,197) and further in view of Baker (US 5,948,080).

Regarding claims 7 and 15, Bryers/Thacker combination discloses all of the claimed limitations as discussed above, except the step of determining whether the write buffer is busy prior to writing the modified security association data structure thereto. Baker discloses a method for assigning communication channel number to a received data packet including the step of checking the data packet status and when valid status is available or busy (col.26, line 23 to col. 27, line 44, Baker). It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the combination system of Bryers and Thacker to include the claimed feature as taught by Baker. The motivation of doing so would have been to provide a fast, efficient and practical way to prioritize the data packets in the security channel (col.3, lines 32-35, Baker).

Regarding claim 18, Bryers discloses in a system having multiple security channels, a method of modifying an entry in a security association database, the method associated with each channel comprising:

- requesting access to a predetermined address location in the security association database ([0286]-[0287], Bryers);
- assigning a weight value to the request based on a sequential order of the request relative to access requests to the predetermined address location made by other of the security channels ([0178]-[0183], Bryers);
- retrieving the security association data structure from the predetermined address location ([0194]; [0195] and [0198], Bryers discloses the retrieving the security association information from the stage 380-1);
- modifying the retrieved security association data structure ([0194] and [0195], Bryers discloses that the retrieved security association will be updated would reads on "modifying the retrieved security association");
- writing the modified security association data structure to the write buffer; and writing the modified security association data structure to the predetermined address location in the security association database from the write buffer ([0195]; [0289]; [0291]; [0298]; [0322] and [0409], Bryers).

Bryers, however, does not discloses whether another of the multiple security channels has a higher priority to access a security association database structure located at a predetermined address location in the security association database. Thacker, on the other hand, discloses a distributed dynamic priority arbitration method for access to a shared resource including the

comparation of whether the current level or another level has higher priority to access the shared resource (abstract; col.3, line 33 to col.4, line 44, Thacker). Therefore, it would have been obvious to one of ordinary skill in the art to apply the dynamic priority arbitration method of Thacker into the security access structure of Bryers in order to grant access to a higher priority channel.

Bryers/Thacker combination does not disclose the step of determining whether a write buffer is busy or when it is not busy.

Baker discloses a method for assigning communication channel number to a received data packet including the step of checking the data packet status and when valid status is available or busy (col.26, line 23 to col. 27, line 44, Baker). It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the combination system of Bryers and Thacker to include the claimed feature as taught by Baker. The motivation of doing so would have been to provide a fast, efficient and practical way to prioritize the data packets in the security channel (col.3, lines 32-35, Baker).

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Cornils (US 5,944,822) discloses channel isolation arrangement and method for dissociated data.

2. Krishna et al. (US Pub. 2003/0014627 A1) disclose distributed processing in a cryptography acceleration chip.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh B. Thai whose telephone number is 571-272-4029. The examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh B Thai
Examiner
Art Unit 2161

June 15, 2005

UYEN LE
PRIMARY EXAMINER